

REMARKS

The Office Action dated August 7, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-22 are currently pending in the application, of which claims 1 and 20-22 are independent claims. Claims 1, 6, 10-17, and 19-21 have been amended, and claim 22 has been added, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1-22 are respectfully submitted for consideration

Claims 1-15 and 17-21 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,694,471 of Sharp ("Sharp"). Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested in Sharp.

Claim 1, upon which claims 2-19 depend, is directed to an internet protocol based system including a plurality of entities. At least two of the entities are configured to use stream control transmission protocol for signaling therebetween. The stream control transmission protocol signaling includes a source port number, a destination port number, data, and connection identity information relating to a connection between at least two of the entities. The connection identity information identifies the ultimate destination of the data.

Claim 20 is directed to a method for use in an internet protocol based system including a plurality of entities. The method includes sending stream control transmission protocol transport signaling information between two of the entities. The

stream control transmission protocol signaling information includes a source port number, a destination port number, data, and connection identity information relating to a connection between the two entities. The connection identity information identifies the ultimate destination of the data.

Claim 21 is directed to an entity for use in an internet protocol based system. The entity includes a transmission unit configured to send to another entity a stream control transmission protocol transport packet. The entity is configured to include in the packet a source port number, a destination port number, data, and connection identity information relating to a connection between the entity and the another entity. The connection identity information identifies the ultimate destination of the data.

Applicant respectfully submits that Sharp fails to disclose or suggest all of the elements of any of the presently pending claims.

Sharp generally relates to a system and method for periodic retransmission of messages. More specifically, Sharp discusses a system and method for periodic retransmission of messages from a source (computer 12/application 16) to a destination (another computer 12/application 16). The packet transport service may be the Stream Control Transmission Protocol (SCTP).

At column 4, lines 27-33, Sharp describes the SCTP header of a packet that is used to communicate messages between the applications (both numbered 16). The packet header includes a source port number (56) and a destination port number (58).

As described in the present application from page 13, line 9 onwards, in the relevant art, a “source” port number is the sender’s port number, and this can be used by the receiver in combination with a source IP address, the SCTP destination port and possibly the destination IP address to identify the association to which the packet belongs. (An association is one peer-to-peer connection, as described at page 3, line 8 of the present application). The “destination” port number, in contrast, is the SCTP port number to which the packet is destined.

Sharp is concerned only with the operation of the SCTP layer in one SCTP association (*i.e.* between the applications 16). Thus, Sharp discloses an SCTP packet containing a source port number, a destination port number, a stream identifier, and data. In contrast, it has been recognized by the present inventor that a link between two endpoints in an IP network may consist of multiple SCTP associations. For example, with reference to Fig. 3 of the present application, the link between the IP BTS and the CN can be made via two SCTP associations, the first from the IP BTS to the RNAS and the second from the RNAS to the CN.

Therefore, the presently pending claims recite “connection identity information” in addition to port numbers in the signaling. “Connection identity information” is explicitly defined in the present application at page 10, lines 26-28, of the present application as “additional information used to identify an entity, application, signalling [sic – British spelling] flow, connection or the like,” such as those discussed at page 10, lines 14-26. Sharp does not disclose or suggest any such feature.

Indeed, since Sharp does not discuss providing a signal with any addressing in addition to the addressing associated with the single SCTP association, Sharp does not disclose such “connection identity information,” as defined above, in addition to the source and destination port numbers defined by the SCTP protocol. Therefore, Claims 1, 20, 21, and 22 (each of which recite “connection identity information”) are clearly novel over Sharp. Thus, it is respectfully requested that the rejection of claims 1 and 20-21 be withdrawn.

Furthermore, the claims have been amended to clarify that the connection identity information identifies the ultimate destination of the data. Sharp does not disclose this feature, and so claims 1, 20, 21 and 22 are also novel over Sharp for this additional reason. Thus, it is again respectfully requested that the rejection of claims 1 and 20-21 be withdrawn.

Claims 2-15 and 17-19 depend from and further limit claim 1. Each of claims 2-15 and 17-19, therefore, recites subject matter that is neither disclosed nor suggested in Sharp. It is, therefore, respectfully requested that the rejection of claims 2-15 and 17-19 be withdrawn.

Claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp in view of U.S. Patent Application Publication No. 2001/005145 of Willars (“Willars”). The Office Action took the position that Sharp discloses most of the features of the claim, but cited Willars to remedy certain deficiencies of Sharp with respect to the further

limitations of claim 16. Applicant respectfully submits that claim 16 recites subject matter that is neither disclosed nor suggested by the combination of Sharp and Willars.

Claim 16 depends from and further limits claim 1. At least some of the deficiencies of Sharp with respect to claim 1 are discussed above. Willars does not remedy the above-identified deficiencies of Sharp, whether or not Willars remedies the deficiencies of Sharp for which it was cited.

Willars generally relates to combining differing transport technologies in a telecommunication system. The Office Action cited Willars with respect to a feature relating to forwarding SCTP packets. Accordingly, it is unsurprising that Willars fails to remedy the above-identified deficiencies of Sharp. Accordingly, it is respectfully submitted that the combination of Sharp and Willars fails to disclose or suggest all of the elements of any of the presently pending claims, and it is respectfully requested that the rejection of claim 16 be withdrawn.

Additionally, certain embodiments of the present invention possess critical and unobvious advantages. For example, certain embodiments of the present invention remove the requirement for an extra layer between the stream control transmission protocol (SCTP) layer and the radio access network application part (RANAP) layer in an internet protocol based system. The RANAP layer does not (conventionally) contain sufficient addressing information in the application level messages, and therefore accurate addressing has (conventionally) to be done below this layer. Rather than

introducing an extra layer which greatly complicates the system, a better solution is provided by certain embodiments of the present invention.

According to the present invention as recited in independent claims 1, 20, 21, and 22, SCTP signaling/SCTP transport packets between at least two entities in an internet protocol based system can include connection identity information relating to a connection between the at least two entities, in addition to the source and destination port numbers defined by the SCTP protocol.

As discussed above, a link between two endpoints may involve more than one SCTP association (peer-to-peer connection). A problem arises in that the RANAP layer does not provide sufficiently accurate addressing information. Consequently, in some systems the so-called “adaptation layer” is required to provide this accurate addressing. This layer is complex so as to provide addressing within a range of interconnected systems (*e.g.* a GSM network connected to an IP based network).

The present inventor has recognized that when a signal is to be sent between two endpoints wholly within an IP based network, such an adaptation layer is unduly complex, and serves only to complicate the system, increase costs and decrease performance.

Certain embodiments of the present invention, therefore, provide the SCTP layer with connection identity information, identifying the ultimate destination of the signal, such that the adaptation layer is not required in such instances. In a preferred

embodiment, this information can be provided in the “Payload Protocol Identifier” field of the SCTP packet, as discussed at page 11, lines 4-9, of the present application.

As discussed above, there is no disclosure in Sharp of SCTP signaling comprising “data and connection identity information relating to a connection between at least two of said entities, wherein said connection identity information identifies the ultimate destination of said data” as recited in the presently pending claims.

Sharp fails to recognize a need for such addressing, since it is concerned only with a single SCTP association. Therefore, there is no teaching within Sharp that would motivate one of ordinary skill in the art to provide such connection identity information, in addition to the source port number and destination port number.

Furthermore, even if one of ordinary skill in the art determined that there was a need for such addressing, there is certainly no suggestion within Sharp that such addressing can be provided in the SCTP signal, as recited in the presently pending claims. Indeed, one of ordinary skill in the art would instead have chosen to provide the adaptation layer discussed above, because it was the conventional solution.

For all these reasons, Applicant respectfully submits that there is positive evidence of non-obviousness in the form of secondary conditions, that the claims include subject matter that is non-obvious with respect to Sharp and/or Willars.

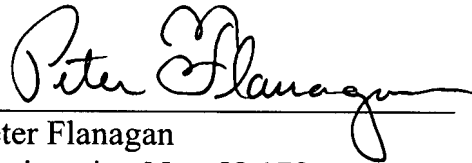
For the reasons set forth above, it is respectfully submitted that each of claims 1-22 recites subject matter that is neither disclosed nor suggested in the cited art. It is,

therefore, respectfully requested that all of claims 1-22 be allowed, and that this application be passed to issuance.

If, for any reason, the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

A handwritten signature in black ink, reading "Peter Flanagan", written over a horizontal line.

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